

Table of Contents

Introduction.....	1
Objective of This Textbook.....	1
Textbook Outline	1
Textbook Conventions	2
Exercise Files	2
Introduction to Design Animation	3
Definitions and Terminology.....	3
Animation User Interface.....	4
Animation Icons.....	5
The Applications Menu.....	6
The Animation Menu	6
The View Menu	7
The Tools Menu	7
The Edit Menu	8
Animation Connection Symbols	8
Animation Display Options	9
Animation Settings	10
Design Animation Overview.....	11
Exercise 1 – Introduction.....	12
Bodies and Ground	15
Introduction.....	15
Defining Bodies and Ground.....	16
Exercise 2 – Bodies and Ground	17
View at Time	21
Introduction.....	21
Defining View at Time	22
Exercise 3 – View at Time.....	23
Timeline and Interpolation.....	28
Introduction.....	28
Timeline Domain	29
Animation Interpolation	30
Exercise 4 – Timeline and Interpolation.....	31
Key Frame Sequences	39
Introduction.....	39
Creating Snapshots.....	40
The Drag Dialog Box.....	41
The Drag Dialog Box (continued).....	42
Creating Key Frame Sequences	43
The Key Frame Sequence Dialog Box.....	44
Reference Body	45
Body Status	46
The Key frame Sequence Dialog Box.....	47
Instances Vs Copies of Key Frame Sequences.....	48
Exercise 5 – Key Frame Sequences.....	49

Transparency and Display at Time	67
Introduction.....	67
Defining Transparency at Time.....	68
Defining Display at Time	69
Exercise 6 – Transparency and Display at Time	70
Events and Sub-Animations.....	78
Events	78
Creating Events.....	79
Sub-Animations.....	80
Body Lock and Connection Status.....	83
Introduction.....	83
Defining Body Lock	84
Defining Connection Status.....	85
Servo Motors.....	86
Introduction.....	86
Creating Servo Motors	86
The Servo Motor Dialog Box.....	87
The Servo Motor Time Domain Dialog Box	88
The Servo Motor Definition Dialog Box.....	89
Servo Motor Profile	90
Servo Motor Profile (continued)	91
Servo Motor Profile Magnitude Types.....	92
Servo Motor Initial Position	93
The Graphtool	94
Exporting the Graphtool Results	95
Customizing the Graphtool.....	96
Instances Vs Copies of Servo Motors	97
Editing Servo Motors.....	97
Exercise 7 – Events, Body Lock, Connection Status, and Servo Motors	98
Playbacks and Movies	112
Introduction.....	112
Save the Animation	113
Collision Detection Settings	114
Playback Options	115
Replay the Animation	116
Create a Movie.....	117
Create Images for a Slideshow.....	118
Exercise 8 – Playbacks and Movies	119
Explode States Animations	125
Introduction.....	125
Creating Explode States	126
The Explode Position Dashboard Tool	127
Creating Key Frame Sequences.....	128
The Key Frame Sequence Dialog Box.....	129
The Key Frame Sequences Dialog Box.....	130
Editing Key Frame Sequences	130
Exercise 9 – Explode States Animations	131